



Carbon Sequestration Leadership Forum

The Carbon Sequestration Leadership Forum is an international climate change initiative that will focus on development of carbon capture and storage technologies as a means to accomplishing long-term stabilization of greenhouse gas levels in the atmosphere. This initiative is designed to improve carbon capture and storage technologies through coordinated research and development with international partners and private industry.

Three types of cooperation are currently envisioned within the framework of the Forum: data gathering, information exchange, and joint projects. Data gathered from participating countries will be aggregated, summarized, and distributed to all of the Forum's participants. Joint projects will be identified by member nations with the Forum serving as a mechanism for bringing together government and private sector representatives from member countries.

The Carbon Sequestration Leadership Forum will be a ministerial-level organization. Current plans call for government officials to convene formally twice a year. The United States will assume responsibility for staffing and administering the Forum with the U.S. Department of Energy (DOE) serving as the lead U.S. agency. DOE will coordinate with the Department of State in identifying international partners. Meeting sites will likely be rotated among member nations.

Why Carbon Sequestration?

While many countries, including the United States, are committed to substantial efforts to enhance the deployment of renewable energy sources and to developing energy efficient technologies for the longer term, fossil energy use for power generation worldwide is projected to double by 2030. Many nations are also advancing new technologies for nuclear energy, which emits no greenhouse gases. These measures will help in reducing emissions of greenhouse gases, but most scientists believe that they alone will not be sufficient to meet the goal of stabilizing atmospheric concentrations of greenhouse gases at acceptable levels.

In fact, global emissions of carbon dioxide from human activities are projected to increase 60 percent by 2020 as many nations continue to rely on coal, oil and natural gas to fuel economic growth. Fossil energy is too large a part of the global economy and too inherently cost-effective to realistically eliminate from the world's energy mix.

Carbon sequestration, however, offers the potential for countries to achieve large-scale reductions of greenhouse gases without necessitating massive and economically disruptive changes to their energy infrastructures.

Under this initiative, carbon sequestration technologies refer to the capture and permanent and safe storage of carbon gases that would otherwise be emitted into the atmosphere. An example would be technologies that separate carbon dioxide from coal-fired power plant emissions and store it in deep underground geological formations. These types of technologies will be the primary focus of the Carbon Sequestration Leadership Forum.



If costs can be reduced and technologies verified as being both practical and safe, carbon sequestration could represent a key pathway for both economically stabilizing atmospheric concentrations of greenhouse gas and securing a sustainable energy future. The Carbon Sequestration Leadership Forum will act as a mechanism for cooperative efforts to develop and deploy this carbon management approach around the world.

What Types of Joint Projects Might Be Facilitated by the Forum?

Studies of various approaches to carbon sequestration cross a number of disciplines – from the physical mechanisms of carbon capture, to the geology of deep reservoir injection, to the biology of agricultural practices, to the chemistry of carbon reactions. Expertise in these disciplines exists throughout the world's technical community, and the Carbon Sequestration Leadership Forum will offer a way for nations to collaborate in a manner that focuses the world's best minds on the most challenging problems.

Global cooperation is already underway in some areas of carbon sequestration. One of the most notable projects is the Weyburn oil recovery project in Saskatchewan, Canada, where carbon dioxide from the Great Plains Coal Gasification Plant in North Dakota is being injected into an active oil field. Scientists from 18 nations are monitoring the project to determine if the carbon dioxide remains entrapped in the field. A similar monitoring effort is taking place in connection with the Sleipner Project in the North Sea off the coast of Norway.

In addition to these activities, other carbon sequestration technologies are emerging from the world's research laboratories. For several of these technologies, a key technical hurdle will be to demonstrate them on a scale large enough to verify their future commercial practicality. For many of these large-scale sequestration projects, international collaboration will be important in leveraging resources.

One such project could be the new hydrogen production and sequestration prototype power plant announced by Secretary of Energy Spencer Abraham on February 27, 2003. This project, estimated to cost \$1 billion over the next 10 years, would combine electricity and hydrogen production with the virtual total elimination of harmful emissions, including greenhouse gases. International support for this project could be considered by the member countries of the Carbon Sequestration Leadership Forum.

Has the First Meeting Been Scheduled?

Yes. The inaugural meeting has been scheduled for June 23-25, 2003, in Northern Virginia. The meeting will last two and one-half days.

The first day will involve presentations by government, the private sector and non-governmental organizations on the status of sequestration research and the technical, economic and public policy challenges that must be addressed. The second day will include a Ministerial Roundtable to discuss the Carbon Sequestration Leadership Forum and what each country hopes to achieve through its participation. The Forum's charter will also be signed by interested participating nations in a concluding ceremony. The third day will serve as the organizational meeting for technical level discussions of participating countries.

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